

CORE0037USASEQ4.txt

SEQUENCE LISTING

<110> Michael, T. Migawa  
Walter F. Lima  
Eric E. Swayze  
Joshua Nichols  
Hongjiang Wu  
Thazha P. Prakash  
Tadeusz Krzysztof Wyrzykiewicz  
Balkrishen Bhat  
Stanley T. Crooke

<120> COMPOSITIONS AND METHODS FOR OPTIMIZING  
CLEAVAGE OF RNA BY RNASE H

<130> CORE0037USA

<140> 10/592,919  
<141> 2007-07-31

<150> PCT/US2005/008428  
<151> 2005-03-15

<150> 60/609,516  
<151> 2004-09-13

<150> 60/567,016  
<151> 2004-04-29

<150> 60/553,646  
<151> 2004-03-15

<160> 48

<170> FastSEQ for Windows Version 4.0

<210> 1  
<211> 20  
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<220>  
<223> Synthetic oligonucleotide

<400> 1  
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<210> 2  
<211> 20  
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<220>  
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<400> 2  
agttaggtc tccgatcg

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<210> 3  
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<220>  
<223> Synthetic oligonucleotide

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<400> 3  
 ctgctagcct ctggatttga

20

<210> 4  
 <211> 2160  
 <212> DNA  
 <213> Mus musculus

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 tcagctctc cctctcgaa gctcgcagcca tgatggaaat ttgagagttt agccgcgtgt 180  
 aggccaggcc cgccgcaggc gagggagatg agagacggcg gcggccacgg cccagagccc 240  
 ctctcgcgc ctgtgagcag ccgcggggc acgcgcctcg gggagccggc cgggcggcgg 300  
 cggcggcagc ggccggcgggc ctgcgcctct cgtcgctgt tctaaccggg cagttctga 360  
 gcagcttcgg agagagacgg tggaaaagc cgtggggctgt agcgggagcc gcgcaggtct 420  
 cggcggctgc accctccgc cctggagcgg gggggagaag cggccggcggc ggccgcgtct 480  
 cgggggaggg ggtcgaggc gcctgtcacc attgccagg ctgggaacgc cggagagttt 540  
 ctctctcccc ttctctcgcc tccaaacacgg cggcggcggc ggcgcacgt ccagggaccc 600  
 gggccgtgt taagcctccc gtccggcgcc gccgcacccc ccctggcccg ggctccggag 660  
 gccgcggag gaggcagccg ctgcgaggat tatccgtctt ctccccattc cgctgcctcg 720  
 gctgcaggc ctctggctgc tgaggagaag caggcccagt ctctgcacacc atccagcagc 780  
 cgccgcagca gccattaccc ggctcggtc cagggccaag cggcagcaga gcgagggcca 840  
 tcagcgaccg ccaagtccag agccatttcc atcctgcaga agaagcctcg ccaccagcag 900  
 cttctgcat ctctctccct cttttcttc agccacaggc tcccagacat gacagccatc 960  
 atcaaagaga tcgttagcag aaacaaaagg agatatacag aggttgttgc cgaacttagac 1020  
 ttgacctata ttatccaaa tattattgtt atgggatttc ctgcagaaag acttgaaggt 1080  
 gtatacagga acaatattga tgatgttaga aggtttttgg attcaaagca taaaaccat 1140  
 tacaagatat acaatctatg tgctgagaga cattatgaca ccgcacaaatt taactgcaga 1200  
 gttgcacagt atccctttga agaccataac ccaccacagg tagaacttat caaacccctc 1260  
 tgtgaagatc ttgaccaatg gctaagtgaa gatgacaatc atgttgccgc aattcaactgt 1320  
 aaagctggaa agggacggac tggtgtaatg atttgtccat atttatttgc tcggggcaaa 1380  
 ttttaaagg cacaagaggc cctagatttt tatggggaaag taaggaccag agacaaaaag 1440  
 ggagtcccaa ttcccagtca gaggcgctat gtatattt atagcttacat gctaaaaaat 1500  
 cacctggatt acagacccgt ggcactgctg tttcacaaga tgatgtttga aactattcca 1560  
 atgttcagtg gccgaacttg caatccctcag tttgtggctt gccagctaaa ggtgaagata 1620  
 tattcccca attcaggacc cacggccgg gaggacaagt tcatgtactt tgagttccct 1680  
 cagccattgc ctgtgtgtgg tgatataaaa gttagttct tccacaaaca gaacaagatg 1740  
 ctcaaaaagg acaaaaatgtt tcactttgg gtaaatacgt tcttcataacc aggaccagag 1800  
 gaaacctcag aaaaagtggaa aatgaaatgt ctttgtatc agggaaatcga tagcatttgc 1860  
 agtatacagc gtgcagataa tgacaaggag tatcttgtac tcaccctaac aaaaaacgat 1920  
 cttgacaaag caaacaaga caaggccaac cgatacttct ctccaaattt taaggtggaa 1980  
 ctatactta caaaaacagt agaggagcca tcaaataccat aggcttagcag ttcaacttct 2040  
 gtgactccag atgttagtga caatgaacct gatcattata gatattctga caccactgac 2100  
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<210> 5  
 <211> 24  
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<220>  
 <223> Synthetic oligonucleotide

<400> 5  
 atgacaatca tggcggcggc attc

24

<210> 6  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide

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<400> 6 cgatgcata aatatgcaca aatca	25
<210> 7 <211> 28 <212> DNA <213> Artificial Sequence	
<220> <223> Synthetic oligonucleotide	
<400> 7 ctgtaaagct ggaaaggac ggactgg	28
<210> 8 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Synthetic oligonucleotide	
<400> 8 ccttccctga aggttcctcc	20
<210> 9	
<400> 9 000	
<210> 10 <211> 12 <212> RNA <213> Artificial Sequence	
<220> <223> Synthetic oligonucleotide	
<400> 10 cgcgaaucg cg	12
<210> 11 <211> 12 <212> RNA <213> Artificial Sequence	
<220> <223> Synthetic oligonucleotide	
<400> 11 gcgcuaagc gc	12
<210> 12 <211> 19 <212> RNA <213> Artificial Sequence	
<220> <223> Synthetic oligonucleotide	
<400> 12 cgagaggcgg acgggaccg	19
<210> 13 <211> 21	

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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide

<220>  
<221> misc\_feature  
<222> 1-19  
<223> Bases at these positions are RNA

<400> 13  
cgagaggcgg acgggaccgt t

21

<210> 14  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide

<220>  
<221> misc\_feature  
<222> 1, 2, 3, 5, 6, 7, 8, 10, 11, 12, 13, 14,  
16, 18, 19  
<223> Bases at these positions are RNA

<400> 14  
cggccccgtc cgcctctcggt t

21

<210> 15  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide

<220>  
<221> modified\_base  
<222> 4  
<223> N = tetrafluoroindole

<400> 15  
ctgnttagcct ctggatttga

20

<210> 16  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide

<220>  
<221> modified\_base  
<222> 5  
<223> N = tetrafluoroindole

<400> 16  
ctgcnagcct ctggatttga

20

<210> 17  
<211> 20  
<212> DNA

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<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide

<220>

<221> modified\_base

<222> 6

<223> N = tetrafluoroindole

<400> 17

ctgctngcct ctggatttga

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<210> 18

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide

<220>

<221> modified\_base

<222> 7

<223> N = tetrafluoroindole

<400> 18

ctgctancct ctggatttga

20

<210> 19

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide

<220>

<221> modified\_base

<222> 8

<223> N = tetrafluoroindole

<400> 19

ctgctagnct ctggatttga

20

<210> 20

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide

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<221> modified\_base

<222> 10

<223> N = tetrafluoroindole

<400> 20

ctgctagccn ctggatttga

20

<210> 21

<211> 20

<212> DNA

<213> Artificial Sequence

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<220>  
<223> Synthetic oligonucleotide

<220>  
<221> modified\_base  
<222> 5  
<223> N = N-3-methyl-2'MOE-thymidine

<400> 21  
ctgcnagcct ctggatttga

20

<210> 22  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide

<220>  
<221> modified\_base  
<222> 17  
<223> N = tetrafluoroindole

<400> 22  
ctgctagcct ctggatntga

20

<210> 23  
<211> 20  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide

<220>  
<221> modified\_base  
<222> 16  
<223> N = tetrafluoroindole

<400> 23  
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20

<210> 24  
<211> 20  
<212> DNA  
<213> Artificial Sequence

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<223> Synthetic oligonucleotide

<220>  
<221> modified\_base  
<222> 15  
<223> N = tetrafluoroindole

<400> 24  
ctgctagcct ctggntttga

20

<210> 25  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide

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<220>  
<221> modified\_base  
<222> 14  
<223> N = tetrafluoroindole  
  
<400> 25  
ctgctagcct ctgnatttga 20  
  
<210> 26  
<211> 20  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide  
  
<220>  
<221> modified\_base  
<222> 13  
<223> N = tetrafluoroindole  
  
<400> 26  
ctgctagcct ctnngatttga 20  
  
<210> 27  
<211> 20  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide  
  
<220>  
<221> modified\_base  
<222> 5, 15  
<223> N = tetrafluoroindole  
  
<400> 27  
ctgcnagcct ctggntttga 20  
  
<210> 28  
<211> 20  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide  
  
<220>  
<221> modified\_base  
<222> 16  
<223> N = N-3-methyl-2'-MOE-thymidine  
  
<400> 28  
ctgctagcct ctgganttga 20  
  
<210> 29  
<211> 20  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide  
  
<220>

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<221> modified\_base  
<222> 7  
<223> N = 2'-ara-fluorothymidine or pseudouridine or  
2'-fluorothymidine or 2-thiouridine or  
2'-S-methylthymidine or 4'-methylthymidine or  
3'-methylthymidine

<400> 29  
ctacgcnttc cacgcacagt 20

<210> 30  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide

<220>  
<221> modified\_base  
<222> 8  
<223> 2'-ara-fluorothymidine or pseudouridine or  
2'-fluorothymidine or 2-thiouridine or  
2'-S-methylthymidine or 4'-methylthymidine or  
3'-methylthymidine

<400> 30  
ctacgctntc cacgcacagt 20

<210> 31  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide

<220>  
<221> modified\_base  
<222> 9  
<223> 2'-ara-fluorothymidine or pseudouridine or  
2'-fluorothymidine or 2-thiouridine or  
2'-S-methylthymidine or 4'-methylthymidine or  
3'-methylthymidine or abasic nucleotide or 2,4-F-tolyl

<400> 31  
ctacgcttnc cacgcacagt 20

<210> 32  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide

<220>  
<221> modified\_base  
<222> 10  
<223> 2'-ara-fluorocytidine or abasic nucleotide or  
2,4-F-tolyl

<400> 32  
ctacgcttn cacgcacagt 20

<210> 33

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<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide

<220>  
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<222> 11  
<223> abasic nucleotide or 2,4-F-tolyl

<400> 33  
ctacgcttcc nacgcacagt

20

<210> 34  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide

<220>  
<221> modified\_base  
<222> 12  
<223> adenine with propyl linker or adenine with butyl  
linker or adenine with pentyl linker or  
tetrahydrofuran or 4-Me-ben

<400> 34  
ctacgcttcc cncgcacagt

20

<210> 35  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
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<220>  
<221> modified\_base  
<222> 13  
<223> 2'-ara-fluorocytidine

<400> 35  
ctacgcttcc cangcacagt

20

<210> 36  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide

<220>  
<221> modified\_base  
<222> 14  
<223> guanine with propyl linker or tetrahydrofuran or  
gancyclovir

<400> 36  
ctacgcttcc cacncacagt

20

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<210> 37  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide

<220>  
<221> modified\_base  
<222> 15  
<223> 2'-ara-fluorocytidine or cytidine with propyl linker or cytidine with butyl linker or cytidine with pentyl linker

<400> 37  
ctacgcttac cacgnacagt 20

<210> 38  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide

<220>  
<221> modified\_base  
<222> 4  
<223> N= Tetraflouroindole

<400> 38  
agtntaggta tccgatcgta 20

<210> 39  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide

<220>  
<221> modified\_base  
<222> 5  
<223> N= Tetraflouroindole or N= 2,3,4,5-tetraflourophenyl

<400> 39  
agttnaggta tccgatcgta 20

<210> 40  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide

<220>  
<221> modified\_base  
<222> 6  
<223> N= Tetraflouroindole or N= 2,3,4,5-tetraflourophenyl

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agtttnggtc tccgatcgctc

<210> 41  
<211> 20  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide

<220>  
<221> modified\_base  
<222> 7  
<223> N= Tetraflouroindole

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<210> 42  
<211> 20  
<212> DNA  
<213> Artificial sequence

<220>  
<223> Synthetic oligonucleotide

<220>  
<221> modified\_base  
<222> 8  
<223> N= Tetraflouroindole

<400> 42  
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<210> 43  
<211> 20  
<212> DNA  
<213> Artificial sequence

<220>  
<223> Synthetic oligonucleotide

<220>  
<221> modified\_base  
<222> 13  
<223> N= Tetraflouroindole

<400> 43  
agtttaggtc tcngatcgctc

<210> 44  
<211> 20  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide

<220>  
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<222> 14  
<223> N= Tetraflouroindole

<400> 44  
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<210> 45  
<211> 20  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide

<220>  
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<400> 45  
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<210> 46  
<211> 20  
<212> DNA  
<213> Artificial Sequence

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<220>  
<221> modified\_base  
<222> 16  
<223> N= Tetraflouroindole

<400> 46  
agttaggtc tccgancgtc

20

<210> 47  
<211> 20  
<212> DNA  
<213> Artificial Sequence

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<223> Synthetic oligonucleotide

<220>  
<221> modified\_base  
<222> 17  
<223> N= Tetraflouroindole

<400> 47  
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20

<210> 48  
<211> 20  
<212> DNA  
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<220>  
<221> modified\_base  
<222> 6, 16  
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<400> 48  
agttnngtc tccgancgtc

20